giving the dimensions and coloration of the eggs by the sets examined, but I did not venture to change the number when given by other writers, lest such changes, based on my limited observation, might prove erroneous or misleading; but the more I look the matter over, its importance to my mind increases. I therefore call attention to it, hoping to draw out, through 'The Auk' and other sources, the views of others.—N. S. Goss, *Topeka, Kans.*

CORRESPONDENCE.

[*Correspondents are requested to write briefly and to the point. No attention will be paid to anonymous communications.*]

The Camera and Field Ornithology.

To the Editors of the Auk:—

Dear Sirs:—A year ago last autumn I purchased me a first class photograpic camera with all the chemicals and appliances complete. In doing this I had three or four objects in view, in which it struck me that this instrument could be of very considerable assistance. In the first place, I was led to believe that it would prove a valuable auxiliary in my anatomical work, such as the photographing of certain dissections, osteological subjects, and the reduction in size of large skeletons that I intended to have lithographed to illustrate my memoirs. Secondly, I found myself in an Indian country that was rapidly undergoing those changes which an advancing civilization is sure to bring with it, and it was my aim to preserve, in the way of good photographs, much that pertained to their life, habits, and mode of living in the past, etc. Lastly, however, I felt that I had a very pretty field open before me that would, if worked with patience, yield another valuable series of figures for illustrative work, and this was the photographing in their native haunts many of the wild animals of the country. During the past ten years I have seen the time when I have been near enough to have obtained good photographs, either in the mountains or on the boundless plains, of such animals as our antelope, buffalo, mountain sheep, and a great many of the smaller mammals and birds. In this letter, however, it is my object merely to say a few words in regard to the advantages to be derived from the use of the camera in field ornithology. In the first place, if we can secure good photographic negatives of such subjects, the rapidly-improving processes permit us to transfer them with absolute accuracy to either metal or stone, and if I am not mistaken, to wood, also. Moreover, these processes are becoming cheaper and better every year that goes by, so that it falls within the means of nearly every scientific publishing medium to reproduce such drawings

from the negatives, and thus secure the most accurate class of figures of living birds.

Again, if we photograph, or rather print them on non-albumenized paper, they may be *colored* very nicely from the original subject. By the use of an 'instantaneous shutter,' I find that birds may be obtained in nearly all positions, and I know of no pursuit so thoroughly full of interest for the ornithologist as this photographing of birds in their native haunts. It requires, too, all the ingenuity at our command, to say nothing of patience, to pursue it successfully. Birds may be photographed in the most engaging of their avocations, and in the most interesting attitudes for illustrations that one can possibly imagine. Out here on the prairies we will often find an old stump or stalk, upon which a dozen or fifteen species of birds will alight during seven or eight hours, on almost any day suitable to use the camera upon them. Now all we have to do is to properly set up our instrument near this point, conceal it in such a way as not to alarm the birds, focus it sharply upon the perch where they alight, place on your 'snap shutter,' and fix it with a string, and then remove yourself far enough away to pull it, when you have a subject sitting to your liking. Birds that you have wounded but slightly may be photographed under the most favorable circumstances; they may also be taken while sitting on their nests; in actual flight, however swift; in pursuit of their food; in leading about their young; indeed, the list is almost an endless one.

Rookeries also offer admirable subjects, and a splendid field is open at those wonderful resorts of water-birds in such places as the Bahamas or the Alaskan coasts. In the former locality, during the breeding season, I have seen the time when I could have secured excellent pictures of the majority of species in the most interesting positions possible.

Even now, there are a great many of our birds that still remain to be figured, and a number that have already been produced,—yes, in some cases by so famous a master as Audubon,—that will repay reproduction. Take for instance his *Myadestes townsendi;* it is an exceedingly indifferent representation of the bird, and figures only the female besides. Moreover, it is evident from his illustration that Audubon was under the impression (he never having seen it alive) that its action was more or less akin to some such bird as a Redstart, whereas its behavior in life fails to remind us at all of any such species.

If I remember correctly, my photographic outfit cost me something like $125, but very good ones, I believe, can be purchased for about $50, which will take an excellent 5 × 8 picture. The art, in its present state of perfection, is a delightful study and brimful of interest. Never shall I forget my sensations, as, shut up in a small, dark room, lit only by the ruby lantern, I studied to develop my first plate of a living animal, taken by myself. It was a fine old *Neotoma*, and I can well remember my enthusiasm as I saw his form slowly, but sharply, come out on the plate, as I rocked it to and fro in the developing tray.

R. W. Shufeldt.

Fort Wingate, N. Mex., Feb. 10th, 1887.